

Combined Heat and Power Project at Ninewells Hospital and Medical School, Dundee, UK.



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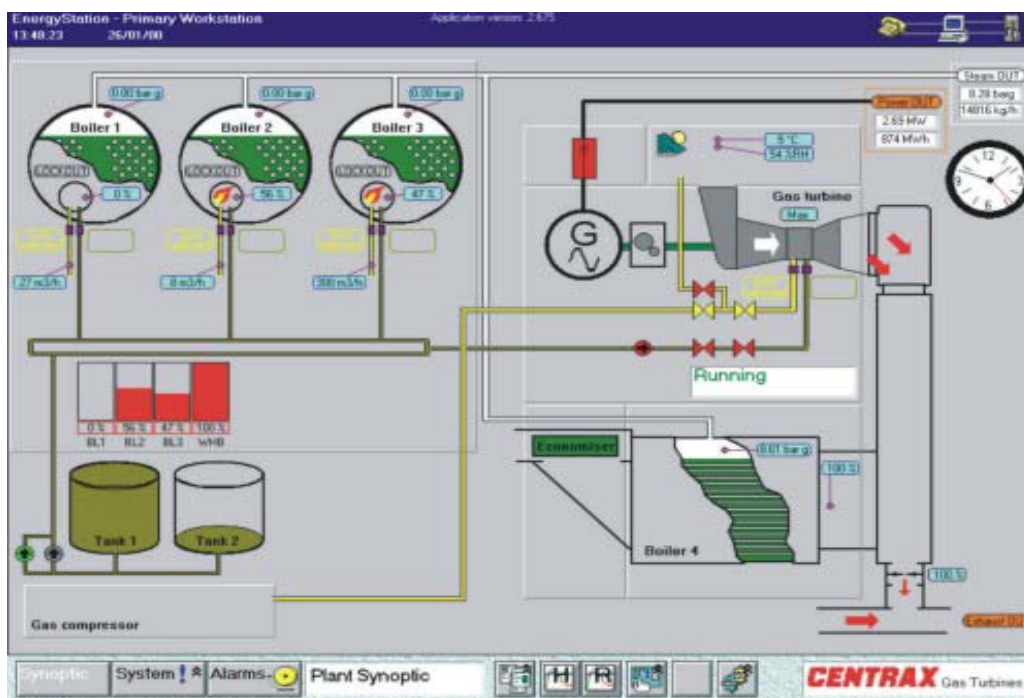
Company : Scottish and Southern Energy plc
 Location : Ninewells Hospital, Dundee, Scotland
 Type of Activity : Tayside Universities NHS Trust Hospital & Medical School

A large contribution towards cost saving is being achieved at the 750 bed Ninewells Teaching Hospital in Dundee with the operation of a Centrax CX501-KB3 generator set. The trust to which the Hospital belongs covers Dundee, North Fife, Perthshire and Angus and was the first in Scotland to realise the benefits of CHP.

The unit was installed following an agreement between Scottish and Southern Energy and the Tayside Universities NHS Trust for the supply of energy.

Total site demand for electricity is approximately 4 MW and total steam requirement varies from around 2 t/hr. on a warm summer evening to 22 t/hr on a cold winters day. The dual fuel unit provides 2.6 MW of electrical power plus 7 t/hr of associated steam generated through a waste heat recovery boiler, backed up with fired boilers and a grid connection for electricity top-up. Pressure must always be maintained between 7.6 and 8.4 barg.

The day to day operation of the plant is by Tanaris Energy Ltd. and is complete with a SCADA system which is mimicked in Scottish and Southern Energy's offices in Perth and also the estates offices within the hospital complex.



CHP plant - General overview

Technical Information

Generator Set		
Packager	: Centrax Gas Turbines	Waste Heat Recovery
Type	: CX501KB3	Boiler
Nominal Output	: 2.6 MWe	Type
		Max. Steam Output
Gas Turbine	: Rolls-Royce Corporation	
Type	: 501 KB3	Additional fired boilers
Fuel	: Dual Fuel	: 3
Speed	: 12,857 rpm	Control System
		Centrax SCADA, Data logging and monitoring of the CHP process
Generator	: Brush	
Type	: BJ45.65/4	
System Voltage	: 11kV, 3 phase, 50Hz	
Speed	: 1500 rpm	

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